

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

WEATHERFORD U.S., L.P.,
Petitioner,

v.

HALLIBURTON ENERGY SERVICES, INC.,
Patent Owner.

IPR2024-00990
Patent 11,333,007 B2

Before FRANCES L. IPPOLITO, ROBERT L. KINDER, and
BRENT M. DOUGAL, *Administrative Patent Judges*.

DOUGAL, *Administrative Patent Judge*.

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

I. INTRODUCTION

We previously instituted trial as to claims 1–12 and 14–23 of U.S. Patent No. 11,333,007 B2 (Ex. 1001, “the ’007 patent”). Paper 7. After institution, Patent Owner filed a Motion to Amend, contingent on the patentability of claims 3, 6, 8, 9, and 11–13. Paper 11 (“Motion”). In the Motion, Patent Owner requested that we provide preliminary guidance in accordance with 37 C.F.R. § 42.121(a)(1)(ii). *Id.* at 1. Petitioner filed an Amended Opposition. Paper 17 (“Opp.”).

In this Preliminary Guidance, we provide information indicating our initial, preliminary 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). Finally, this 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. *See id.* 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. The views in this Preliminary Guidance are subject to change upon consideration of the complete record. 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, based on the current record, it appears that 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).

As an initial matter, proposed substitute claim 30 is offered as a replacement for claim 13. App’x A, 3–4. As Petitioner points out (Opp. 1), claim 13 was not challenged in the Petition. *See* Pet. 29. Patent Owner’s motion is “contingent on the Board finding unpatentable each original claim replaced by the corresponding substitute claims.” Mot. 1. There is no chance that we will find original claim 13 unpatentable in a Final Written Decision. Accordingly, we would deny the motion as to proposed substitute claim 30. We note, however, that Patent Owner may attempt to pursue the subject matter of proposed substitute claim 30 as a replacement for a challenged claim.

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 to cancel seventeen claims (claims 3, 6, 8, 9, 11–23) and proposes seventeen substitute claims (proposed substitute claims 24–40).

We presume one substitute claim per challenged claim to be reasonable. 37 C.F.R. § 42.121(a)(3). Petitioner does not contest Patent Owner’s arguments on this point (apart from pointing out that claim 13 is not challenged). *See generally* Opp. 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 it presents the claim amendments to distinguish the proposed substitute claims over the combinations of references asserted in the instituted obviousness grounds. Mot. 2–3. In particular, Patent Owner contends that the proposed amendments to independent claims 11, 14, and 21 distinguish “the amended claims from concentric sand screens described in Yeh (Ex. 1005) and Yeh2 (Ex. 1006).” *Id.* at 3. Petitioner does not contest Patent Owner’s arguments on this point. *See generally* Opp.

On this record, Patent Owner has shown that the Motion responds to a ground of unpatentability involved in this proceeding.

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 the proposed substitute claims do not broaden the original claims. Mot. 3–4. Patent Owner further states that “[p]roposed amendments to original independent claims 11, 14, and 21 only add narrowing elements, and independent claim 1 retains its original scope.” *Id.* at 3. Petitioner does not contest Patent Owner’s arguments on this point. *See generally* Opp.

On this record, Patent Owner has shown that the motion to amend does not enlarge the scope of the claims of the '007 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). Patent Owner provides a table showing support for each limitation of each proposed substitute claim in both the '711 application and the '813 provisional application. Mot. 5–21. Petitioner does not contest Patent Owner's position for any proposed limitation. *See generally* Opp.

On this record, Patent Owner has shown that the motion to amend does not introduce new subject matter.

B. Board Discretion to Raise New Grounds of Unpatentability

The Board may exercise its discretion to raise a new ground of unpatentability in connection with a proposed substitute claim, irrespective of Patent Owner's and Petitioner's burdens. 37 C.F.R. § 42.121(d)(3); *see Nike, Inc. v. Adidas AG*, 955 F.3d 45, 53 (Fed. Cir. 2020); *Hunting Titan, Inc. v. DynaEnergetics Europe GmbH*, 28 F.4th 1371, 1381 (Fed. Cir. 2022).

We exercise our discretion to raise new grounds of unpatentability. 37 C.F.R. § 42.121(d)(3) and (e)(3), (4). The parties will have an opportunity to respond. 37 C.F.R. § 42.121(d)(3) and (e)(3). Patent Owner may respond in its revised MTA or in its reply to this Preliminary Guidance. *See* 37 C.F.R. § 42.121(e)(3). Petitioner may respond in its sur-reply. *Id.*

1. Indefiniteness

For the reasons discussed below, and based on the current record, proposed substitute claims 24, 25, and 29 are indefinite.

We evaluate indefiniteness in AIA proceedings using the same indefiniteness standard as used in federal courts under *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898 (2014) and its progeny. *See* 37 C.F.R. § 42.100(b) (explaining that in an *inter partes* review, “a claim proposed in a motion to amend under § 42.121, shall be construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b)”); *see also*, *USPTO Memorandum, Approach to Indefiniteness under 35 U.S.C. § 112 in AIA Post-Grant Proceedings* (Jan. 6, 2021) (explaining that “the Board shall ... use the approach set forth by the Supreme Court in *Nautilus* and used by the district courts for assessing questions of indefiniteness in AIA post-grant proceedings”).¹

The definiteness requirement of § 112(b) is satisfied when “a patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable clarity.” *Nautilus*, 572 U.S. 898, 910 (2014).

i. Proposed Substitute Claim 24

Original claim 1 includes

- (1) a first sand screen assembly comprising a shunt tube assembly, the shunt tube assembly having a packing tube, the packing tube “including a plurality of nozzles spaced apart from each other”; and
- (2) a second sand screen assembly comprising a shunt tube assembly, the shunt tube assembly having a packing tube, the packing tube “including a plurality of nozzles spaced apart from each other.”

¹ Available at <https://www.uspto.gov/sites/default/files/documents/IndefinitenessMemo.pdf>

Ex. 1001, 18:19–39.

Proposed substitute claim 24 depends from claim 1 and includes “wherein shunt tube assemblies of the second sand screen assembly have different spacing between the nozzles.” Mot., App’x A, 1.²

As an initial matter, the term “shunt tube assemblies” of the second sand screen assembly lacks antecedent basis. As noted above, claim 1 recites “a second sand screen assembly comprising . . . a shunt tube assembly.” The relationship of the “shunt tube assemblies” (plural) in proposed claim 24 to the “shunt tube assembly” (singular) in claim 1 is unclear.

Further, the full meaning of the “shunt tube assemblies of the second sand screen assembly having different spacing between the nozzles” in proposed substitute claim 24 is unclear. This is partially a result of the lack of antecedent basis discussed above. Independent of this issue, it is further not clear whether the different spacing is in reference to the spacing between adjacent nozzles in the same shunt tube assembly or different from the spacing of nozzles in a different shunt tube assembly.

We note that, as support for this new limitation in the written description, Patent Owner relies page 9, lines 28–29 of the ’007 patent, which states that “the spacing D2 between nozzles 216 of *shunt tube assemblies of the same sand screen assembly* may be the same or different.” Mot. 8 (emphasis added) (also citing Figures 2 and 3). But, that description does not fully resolve the ambiguity in the claim language at this stage.

We further note that Petitioner interprets this limitation to mean that the spacing between nozzles along a particular packing tube is different. *See* Opp. 4.

² Patent Owner filed “Appendix A – Substitute Claims” with separate claim numbering from the Motion itself. We refer to Patent Owner’s page numbering.

Thus, Petitioner appears to interpret “different spacing between the nozzles” as requiring (or *at least* encompassing) different spacing between the nozzles of one particular packing tube.

Patent Owner is advised to clarify the meaning of the claim so that it is clear and unambiguous as to precisely what nozzle spacing is required to be “different” from what other nozzle spacing.

ii. Proposed Substitute Claim 25

Proposed substitute claim 25 depends from original claim 1 and recites, *inter alia*, “wherein the cross-sectional flow area of the first transport tube is less than the cross-sectional flow area of the second transport tube.” Mot., App’x A, 2.

Neither original claim 1 nor claim 25 recites “a first transport tube” or “a second transport tube.” Accordingly, the phrases “the first transport tube” and “the second transport tube” lack antecedent basis.

iii. Proposed Substitute Claim 29

Proposed substitute claim 29 depends from proposed substitute independent claim 28 and recites newly added limitations including “the high pressure shunt tube system” and “the low pressure shunt tube system.” The proposed substitute claims lack antecedent basis for these limitations.

2. Conclusion

For the reasons detailed above, we exercise our discretion to raise new grounds of unpatentability.

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, and based on the current record,³ Petitioner has shown a reasonable likelihood that proposed substitute claims 25–29 and 31–40 are unpatentable.⁴ *See* 37 C.F.R. § 42.121(e)(1).

In support of its Opposition, Petitioner relies on additional prior art reference, Bonner (Ex. 1016), and a Second Declaration of Michael R. Chambers, Sr. (Ex. 1044).

1. Bonner (Ex. 1016)

Bonner is a journal article published in the Society of Petroleum Engineers, and entitled “Design and Validation of an Improved Shunt Tube System.” Ex. 1016, 1. Bonner discloses that “[s]hunt tube technology to mitigate premature bridging in the annulus while pumping slurry has been used successfully in the oilfield for over two decades to assure complete gravel placement.” *Id.* (Abstract). Bonner discloses that “[b]y deploying a screen system empowered with the slurry bypass mechanisms of a shunt system, an operator usually experienced greater job reliability, a reduced possibility of pack failure, and maximized production.” *Id.* Bonner describes a system that “was designed primarily for gravel packing in horizontal wells and is a system with two larger transport tubes and two smaller packing tubes, all mounted to standard sand screens in an eccentric design.” *Id.*

³ We express no view on the patentability of original claims 3, 6, 8, 9, and 11–13 in this Preliminary Guidance. Instead, we focus on limitations added to those claims in Patent Owner’s Motion to Amend.

⁴ In its Opposition, Petitioner does not present any argument that the subject matter of proposed substitute claim 30 is unpatentable. Petitioner’s only argument for claim 30 is discussed above in section II.A. *See* Opp. 1.

2. Different Spacing Between Nozzles (Proposed Substitute Claim 24).

As discussed above in Section B.1, the meaning of the phrase “wherein shunt tube assemblies of the second sand screen assembly have different spacing between the nozzles” is ambiguous and renders proposed substitute claim 24 indefinite. This makes it difficult to evaluate Petitioner’s obviousness challenge.

Petitioner interprets the claim as encompassing nozzles spaced on a packing tube such that the spacing between adjacent nozzles varies along the length of the packing tube. *See* Opp. 3–5. Petitioner argues that “[n]ozzle spacing selection was a result-effective variable because ‘the general conditions of [the] claim are disclosed in the prior art,’ and optimal nozzle spacing was achievable through ‘routine experimentation.’” *Id.* (quoting *In re Applied Materials*, 692 F.3d. 1289, 1295 (Fed. Cir. 2012)). Petitioner argues that this is the case because “the parameters associated with nozzle spacing were known.” *Id.*

Petitioner does not identify any clear disclosure in Yeh or Yeh2 that teaches or suggests varying nozzle spacing. *See id.* at 3–5. Rather, Petitioner focuses on declarant testimony to link various concepts together to argue how those concepts would render the claims obvious, presumably because nozzle spacing is a result-effective variable. *Id.*

At this stage we are not entirely persuaded that nozzle spacing was a result-effective variable in view of the teachings of Yeh or Yeh2. At the same time, with the ambiguity of the claim language and the limited record, we decline to provide further guidance.

3. First and Second Eccentric Sand Screen Assemblies (Proposed Substitute Claims 27, 28, 29, 31, 32, 37, and 38).

Proposed substitute claims 27, 28, 29, 31, 32, 37, and 38 add that the first and second sand screen assemblies are eccentric sand screen assemblies.

Petitioner contends that “[i]t would have been obvious to substitute Bonner’s high-pressure eccentric sand screen for Yeh’s high-pressure concentric sand screen.” Opp. 7. According to Petitioner, “Yeh recommended using concentric sand screens near the heel because of their higher pressure rating.” *Id.* (citing Ex. 1005, 28:18–24, 30:13–26, 30:44–45; Pet. 41; Ex. 1003 ¶¶ 291–92; Ex. 1044 ¶ 64). Petitioner contends that “Bonner later disclosed an eccentric screen with a pressure rating of 5,000 psi, which is higher than the 3,000-psi pressure ratings of the known eccentric screens of the time.” *Id.* (citing Ex. 1016, 12, 16, Fig. 23). Petitioner argues that a person of ordinary skill in the art at the time of the invention would have been motivated to make the proposed substitution because:

Substituting Bonner’s eccentric sand screen for Yeh’s concentric sand screen would: (1) provide for a larger primary flow path both because eccentric screens provide for a larger primary flow path and because of the removal of Yeh’s crossover tool restriction in the primary flow path when transitioning from a concentric to an eccentric primary flow path and (2) be more easily and quickly installed due to Bonner’s improvements. [] Such a simple substitution of one known element for another known in the field to achieve predictable results, such as a larger base pipe, would have been obvious. Because there was a known design need for a higher-pressure shunt tube system, selecting one of the two identified, predictable solutions (Yeh’s concentric or Bonner’s eccentric screen) was at least obvious to try.

Id. at 8 (citations omitted). Petitioner further argues that although “Bonner’s 5,000-psi pressure rating would not achieve the 6,500-psi pressure needed to entirely gravel pack a 5,000-footlong interval, according to Yeh,” “Bonner’s eccentric sand screen would have been useful for intervals of more than 3,000 feet and almost up to 5,000 feet, according to Yeh2’s Figure 15.” *Id.* at 9 (citing Ex. 1005, 28:18–20; Ex. 1006, Fig. 15; Ex. 1044 ¶¶ 70, 71).

Based on our preliminary review, we agree with Petitioner that Bonner discloses eccentric sand screens having a 5,000-psi pressure rating and that it

would have been obvious to substitute Bonner's high-pressure eccentric sand screen for Yeh's high-pressure concentric sand screen for essentially the reasons provided by Petitioner.

4. Cross-sectional Flow Area: First and Second Transport Tubes
(Proposed Substitute Claim 25)

Proposed substitute claim 25 adds "wherein the cross-sectional flow area of the first transport tube is less than the cross-sectional flow area of the second transport tube."

In response, Petitioner argues:

Yeh suggested this limitation. It would have been obvious for the first transport tube of a concentric sand screen assembly to have a smaller cross-sectional flow area than the second transport tube of an eccentric sand screen assembly. A skilled artisan would understand that an eccentric arrangement can provide more annular space for shunt tubes while maintaining the same primary flow path diameter and overall sand screen assembly diameter, permitting the use of larger cross-sectional area shunt tubes than are typically used in a concentric sand screen assembly.

Opp. 5 (citing Ex. 1044 ¶¶ 44, 45). Petitioner also compares Yeh's Figure 9A with Yeh's Figure 8C "showing larger inside diameter in eccentric tubes." *Id.*

Regarding Petitioner's comparison of Yeh's figures, Petitioner does not identify any indication in Yeh that the figures are drawn to scale. In the absence of evidence that Yeh's figures are drawn to scale, we make no presumptions. That being said, Yeh's Figure 9A depicts six tubes concentrically arranged around base pipe 910 including three transport tubes 930A and three packing tubes 932A. Ex. 1005, 25:8–10. Yeh's Figure 8C depicts only four tubes, namely "shunt tubes 830C" that "serve as the alternate flow channels." *Id.* 24:48–50. At this preliminary stage, we agree with Petitioner that the diameter of the tubes would be increased where fewer tubes serve as the alternate flow channels, in order to maintain the

same overall flow. Thus, we agree with Petitioner that Yeh suggests using larger diameter tubes having a larger cross-sectional flow area in the eccentric arrangement (Fig. 8C) than in the concentric arrangement (Fig. 9A).

5. Cross-sectional Flow Area: First and Second Packing Tubes
(Proposed Substitute Claim 29, 34, 39)

Proposed substitute claims 29 and 34 add “wherein a cross-sectional flow area of a packing tube of the high pressure shunt tube system is less than the cross-sectional flow area of a packing tube of the low pressure shunt tube system.”

Proposed substitute claim 39 is substantially similar.

Regarding claim 29, Petitioner argues that this limitation would have been obvious based on the combination of Yeh and Bonner. First, Petitioner contends that “the first eccentric sand screen (Bonner screen) would be modified to operate at 6,500 psi per Yeh’s recommendation.” Opp. 14. Petitioner next contends that “[o]ne of skill would also have been motivated to use thicker-walled packing tubes because of the high-pressure gravel slurry flowing through these tubes at the heel.” *Id.* at 16 (citing Ex. 1044 ¶ 95). According to Petitioner, “[o]ne of skill would be motivated to increase the wall thickness of packing tubes to address erosion concerns in the packing tubes toward the heel in this high-pressure scenario.” *Id.* (citing Ex. Ex. 1044 ¶ 96). Petitioner’s declarant, Mr. Chambers, explains that “[i]ncreasing the wall thickness of the packing tubes would reduce cross-sectional flow area.” Ex. 1044 ¶ 96.

Petitioner’s arguments for this limitation in proposed substitute claims 34 and 39 are essentially the same. *See* Opp. 17 (“*See supra* Claim 29[b]”), 24 (“same reasons discussed *supra* in Claim 29[b]”).

At this preliminary stage and on this record, having reviewed Petitioner’s arguments and evidence, we agree with Petitioner that it would have been obvious

to increase the wall thickness of high pressure packing tubes, thereby reducing the cross-sectional area of said packing tubes (relative to the packing tubes of the low pressure shunt tube system).

6. Packing Tube Interconnected to a Junction Block (Proposed Substitute Claims 26, 30, 33, 40)

Proposed substitute claim 26 adds that “the packing tube of the first sand screen assembly is interconnected to a junction block of the second sand screen assembly.” Proposed substitute claims 30, 33, and 40 recite similar limitations.

Regarding proposed substitute claim 26, Petitioner argues that “Yeh in view of Yeh2 disclosed or suggested this limitation, which adds only routine experimentation for the reasons discussed in the Petition for Claims 3 and 6 relating to using junction blocks and jumper tubes to achieve fluid connectivity between the secondary flow paths of sand screens connected end-to-end.” Opp. 7 (citing Pet. 47–49, 53–55; Ex. 1003 ¶¶ 308–11, 334–40). According to Petitioner, “[a] junction block is a manifold, which distributes slurry between the packing tube and transport tube of a sand screen.” *Id.* (citing Ex. 1003 ¶¶ 309–11). Petitioner further contends that “Yeh also disclosed that the packing tube of the first sand screen assembly is interconnected (and even fluidly connected) to a junction block of the second sand screen assembly as explained with respect to Claims 1[d] and 6 using a crossover tool.” *Id.* (citing Pet. 39–40, 53–55; Ex. 1005, 26:25–32, 28:66–29:2, 30:13–14, Figs. 10A–C; Ex. 1003 ¶¶ 285–89, 334–40; Ex. 1044 ¶¶ 58–59).

On this record, having reviewed Petitioner’s arguments and evidence, we agree with Petitioner that the newly added subject matter of claim 26 would have been obvious over Yeh and Yeh2. Yeh’s Figure 10A is reproduced below as annotated on page 27 of our institution decision (Paper 7).

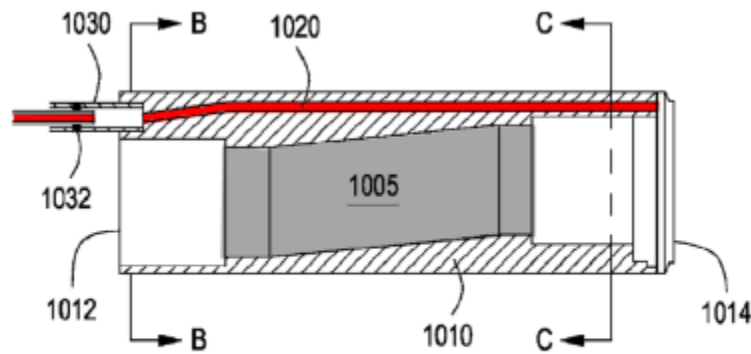


FIG. 10A

Yeh's Figure 10A is a cross-sectional view of a crossover joint which fluidly connects a first wellbore tool to a second wellbore with first end 1012, second end 1014, and bore 1005 serving as a primary flow path. The crossover joint also has a secondary flow path 1020 (highlighted in red). Ex. 1005, 15:41–55. Yeh also discloses that “the eccentric wellbore tool may connect to the first end 1012 of the crossover joint 1000 either directly through a threaded connection, or indirectly through the use of a manifolding joint.” *Id.* 26:25–28.

With regard to Yeh's crossover tool, Mr. Chambers explains that “[b]ecause the shunt tubes of the second sand screen assembly would be accessed via a junction block . . . the packing tube of the first sand screen assembly is also interconnected to a junction block of the second sand screen assembly.” Ex. 1044 ¶ 57 (citing Ex. 1003 ¶¶ 308–11).

Given said disclosures and supporting testimony, at this stage, we agree with Petitioner that Yeh discloses or suggests that a packing tube of the first sand screen assembly is interconnected to a junction block of the second sand screen assembly.

Petitioner's arguments for this limitation in proposed substitute claims 33 and 40 are similar, except that Petitioner additionally relies on Bonner as disclosing this limitation. *See* Opp. 19; *id.* at 25 (referring back to Petitioner's arguments for proposed claim 26 and further arguing that “Bonner also disclosed a

packing tube of an upstream sand screen interconnected to a shunt tube junction block of a downstream sand screen.”). On page 19 of the Opposition, Petitioner reproduces Figure 8 of Bonner, which depicts a “box crossover.” According to Petitioner, Bonner discloses “using a junction block, or ‘box crossover,’ to couple the packing and transport tube of its high-pressure shunt tube system of its eccentric screen, as shown [in Figure 8.]” *Id.* at 16 (citing Ex. 1016, Fig. 8; Ex. 1044 ¶ 117). According to Mr. Chambers, Bonner discloses that “the packing tube of the high-pressure shunt tube system is interconnected to a shunt tube junction block of the high-pressure shunt tube system as is necessarily the case for the system to function.” Ex. 1044 ¶ 117 (discussing Figures 8 and 9 of Bonner).

Given said disclosures and supporting testimony, at this stage, we agree with Petitioner that Bonner additionally discloses or suggests that a packing tube of the first sand screen assembly is interconnected to a junction block of the second sand screen assembly.

III. CONCLUSION

Patent Owner may reply to this Preliminary Guidance *or* file a revised MTA by DUE DATE 3. 37 C.F.R. § 42.121(e)(3), (f); Paper 8. These 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 may file a sur-reply responsive to this Preliminary Guidance, Patent Owner’s reply, or Patent Owner’s revised MTA but may not present new evidence in any case. 37 C.F.R. § 42.121(e)(3). Petitioner may reply to the preliminary guidance even if Patent Owner does not file a reply or revised MTA. 37 C.F.R. § 42.121(e)(4).

Patent Owner is reminded that amendments to the challenged claims may be pursued in a reissue or reexamination proceeding before, during, or after an AIA trial proceeding, including subsequent to the issuance of the Final Written Decision. *See* 84 Fed. Reg. 16,654 (Apr. 22, 2019) (*Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, Patent Owner must 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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